



SAFETY DATA SHEET

1. Identification

Product identifier	BIDRIN® 8
Other means of identification	
SDS number	242
Product registration number	5481-448
Recommended use	Organophosphate insecticide.
Recommended restrictions	This is a Restricted Use Pesticide and is for use by licensed applicators only. Keep out of the Reach of Children!
EPA Registration number	EPA: 5481-448
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	AMVAC Chemical Corporation
Address	4685 MacArthur Court Suite 1200 Newport Beach, CA 92660
Telephone	AMVAC Chemical Corp 949-260-1200 AMVAC Chemical Corp 949-260-6270(FAX)
Website	www.Amvac-Chemical.com
E-mail	CustServ@Amvac-Chemical.com
Emergency phone number	Medical 888-681-4261 CHEMTREC® (USA+Canada) 800-424-9300 Product Use 888-462-6822 CHEMTREC® (Outside USA) +1-703-527-3887

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, oral	Category 2
	Acute toxicity, dermal	Category 3
	Acute toxicity, inhalation	Category 2
	Serious eye damage/eye irritation	Category 2B
	Sensitization, skin	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	
H226	Flammable liquid and vapor.
H300	Fatal if swallowed.
H330	Fatal if inhaled.
H311	Toxic in contact with skin.
H320	Causes eye irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260	Do not breathe mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate media for extinction.
P391	Collect spillage.

Storage

P405	Store locked up.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P235	Keep cool.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

This is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Dicrotophos	2-Dimethylcarbamoyl-1-methylvinyl dimethyl phosphate Bidrin®	141-66-2	82
Isopropanol	2-Propanol; IPA	67-63-0	<15.0

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Call a physician or poison control center immediately.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Have person sip a glass of water if able to swallow. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance.

Most important symptoms/effects, acute and delayed

This is a cholinesterase inhibiting organophosphorous pesticide. Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhea, abdominal cramps, excessive sweating, salivation and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusion; in extreme cases unconsciousness, convulsions, severe respiratory depression and death may occur.

This product is a Cholinesterase Inhibitor. Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product. Preexisting conditions which lower cholinesterase levels increase vulnerability to cholinesterase depression. these include: (for plasma) chronic alcoholism; malnutrition; dermatomyositis; existing toxicity from exposure to carbon disulfide; benzalkonium salts, organic mercury compounds, ciguatoxins or solanines; and (for RBC) hemolytic anemia.

Repeated exposures to small doses of organophosphates may lower the cholinesterase to levels where the above symptoms of acute overexposure are observed.

Indication of immediate medical attention and special treatment needed

This product is an Organophosphate (OP) Insecticide. Do not handle the patient without the following protective equipment in place: chemical resistant gloves and apron (preferably nitrile). Remove contaminated clothing and do not reuse without thorough cleaning with detergent and hot water. Dispose of heavily contaminated clothing, including shoes, as a hazardous waste. Do not wait for laboratory confirmation to treat patients with strong clinical evidence of poisoning. In the USA and other countries, contact your local or national poison control center for more information. Establish airway and oxygenation. IV Atropine sulfate is the antidote of choice against parasympathetic nervous stimulation. If there are signs of parasympathetic stimulation, Atropine Sulfate should be injected at 10 minute intervals in doses of 1 to 2 milligrams until complete atropinization has occurred. Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, an initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion, in 250 cc of saline over a 15 to 20 minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5% solution in water over not less than 2 minutes. After about an hour, a second dose of 1 gram of 2-PAM will be indicated if muscle weakness has not been relieved. For infants and children, the dose of 2-PAM is 0.25 grams. Avoid morphine, aminophylline, phenothiazine, reserpine, furosemide and ethacrynic acid. Clear chest by postural drainage. Oxygen administration may be necessary. Observe patient continuously for 48 hours. Repeated exposure to cholinesterase inhibitors may, without warning, cause prolonged susceptibility to very small doses of any cholinesterase inhibitor. Allow no further exposure until time for cholinesterase regeneration has been attained as determined by a blood test. Bathe and shampoo contaminated skin and hair. If ingested, empty stomach; activated charcoal is useful to further limit absorption. If victim is alert, Syrup of Ipecac (2 tablespoons in adults, 1 tablespoon in small children) is indicated. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

General information

This product is a severe Cholinesterase Inhibitor. A physician should be contacted in all cases of exposure to the technical and its formulations. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

This product will emit toxic fumes when burned, including carbon monoxide. Vapors of the unburned product may also be hazardous. Contact with the fumes and vapors should be avoided by staying upwind and by wearing impervious clothing and positive pressure self-contained breathing apparatus. Vapors may travel considerable distance to a source of ignition and flash back.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Immediately evacuate personnel to safe areas. Keep upwind. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.

Specific methods

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

General fire hazards

Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not get in eyes, on skin, on clothing. Do not breathe mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Siphon the majority of the liquid into drums for use or disposal, depending on the circumstances. Clean the area as described for a small spill.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Decontaminate the area and equipment with dilute alkali or ammonia (less than 5%) and detergent.

Never return spills to original containers for re-use.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Keep away from food, drink and animal feedstuffs. Keep out of the reach of children. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Do not breathe mist or vapor. Do not use in areas without adequate ventilation. Do not get in eyes, on skin, or on clothing. When using, do not eat, drink or smoke. Handle and open container with care. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Isopropanol (CAS 67-63-0)	PEL	980 mg/m3 400 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Dicrotophos (CAS 141-66-2)	TWA	0.05 mg/m3	Inhalable fraction and vapor.
Isopropanol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Dicrotophos (CAS 141-66-2)	TWA	0.25 mg/m3
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3 500 ppm
	TWA	980 mg/m3

400 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropanol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Dicrotophos (CAS 141-66-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Dicrotophos (CAS 141-66-2) Skin designation applies.

US - Tennessee OELs: Skin designation

Dicrotophos (CAS 141-66-2) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Dicrotophos (CAS 141-66-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dicrotophos (CAS 141-66-2) Can be absorbed through the skin.

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Not available.

Other Not available.

Respiratory protection When respiratory protection is required, or concentrations may exceed the PEL, use an approved air-purifying respirator equipped with organic vapor cartridges or canisters. It is recommended that the canisters be changed whenever breakthrough occurs or eight (8) hours of use has occurred, whichever comes first. For emergency and other conditions where the exposure limit may be greatly exceeded, use an approved positive-pressure, self-contained breathing apparatus or positive-airline with auxiliary self-contained air supply.

Thermal hazards Not applicable.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Not available.
Color	Light yellow to dark amber

Odor Mild ester

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point 100 - 109 °F (38 - 43 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%)	Not available.
Vapor pressure	2.13E-04 hPa estimated
Vapor density	Heavier than air
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Miscible
Solubility (solvents)	Soluble in ketones, esters, and aromatic hydrocarbons
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	9.9 lb/gal @ 20 C
Density	1.19 g/ml @ 20 C
Flammability class	Flammable IC estimated

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Not available.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Not available.
Incompatible materials	Not available.
Hazardous decomposition products	Emits hazardous fumes and smoke of unknown composition when heated to decomposition or burned.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms related to the physical, chemical and toxicological characteristics

This product is a Cholinesterase Inhibitor. Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product. Preexisting conditions which lower cholinesterase levels increase vulnerability to cholinesterase depression. These include: (for plasma) chronic alcoholism; malnutrition; dermatomyositis; existing toxicity from exposure to carbon disulfide; benzalkonium salts, organic mercury compounds, ciguatoxins or solanines; and (for RBC) hemolytic anemia.

Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped.

Information on toxicological effects

Acute toxicity Fatal if swallowed. Toxic in contact with skin. Fatal if inhaled. Causes eye irritation.

Components	Species	Test Results
Dicrotophos (CAS 141-66-2)		
Acute		
Dermal		
LD50	Rabbit	876 mg/kg (males) 487 mg/kg (females)
Inhalation		
LC50	Rat	> 0.059 mg/l
Oral		
LD50	Rat	11 mg/kg (males) 8 mg/kg (females)

Components	Species	Test Results
Isopropanol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Skin corrosion/irritation	Not a skin irritant.	
Serious eye damage/eye irritation	Not available.	
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	Skin sensitizer.	
Germ cell mutagenicity	Not available.	
Carcinogenicity	Dicrotophos has shown an increased incidence of thyroid follicular cell adenomas in male mice receiving 50 ppm dicrotophos, the highest dose level tested in a two year study. EPA's Cancer Classification o for Dicrotophos states only 'Suggestive Evidence of Carcinogenicity but Not Sufficient to Assess Human Carcinogenic Potential.' None of the following have classified Dicrotophos as carcinogenic: IARC, NTP, OSHA, or ACGIH.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)		
Not regulated.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	Dicrotophos has shown effects on reproductive performance, pup survival and pup growth but only at dose levels (5 to 25 ppm) that also showed paternal toxicity in a rat multigeneration study.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not an aspiration hazard.	
12. Ecological information		
Ecotoxicity	Very toxic to aquatic life with long lasting effects.	
Components		
Species		
Test Results		
Dicrotophos (CAS 141-66-2)		
Aquatic		
Crustacea	EC50	Water flea (Simocephalus serrulatus) 0.21 - 0.32 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus) 2.8 mg/l, 96 hours
Persistence and degradability	Not available.	
Bioaccumulative potential	Not available.	
Partition coefficient n-octanol / water (log Kow)		
Dicrotophos	2.45, (E-isomer)	
Mobility in soil	Not available.	
Other adverse effects	Not available.	
13. Disposal considerations		
Disposal instructions	Not available.	
Waste from residues / unused products	Dispose of container and residues in accordance with all applicable regulations.	
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal according to all applicable regulations.	
14. Transport information		
DOT		
UN number	UN3017	

UN proper shipping name Organophosphorus pesticides, liquid, toxic, flammable (Dicrotophos, Isopropanol), MARINE POLLUTANT

Transport hazard class(es)

Class 6.1(PGI, II)

Subsidiary risk 3

Label(s) 6.1, 3

Packing group II

Environmental hazards

Marine pollutant Yes

Special precautions for user Not available.

Special provisions IB2, N76, T11, TP2, TP13, TP27

Packaging exceptions 153

Packaging non bulk 202

Packaging bulk 243

IATA

UN number UN3017

UN proper shipping name Organophosphorus pesticides, liquid, toxic, flammable (Dicrotophos, Isopropanol)

Transport hazard class(es)

Class 6.1(PGI, II)

Subsidiary risk 3

Label(s) 6.1, 3

Packing group II

Environmental hazards Yes

Special precautions for user Not available.

Other information

Passenger and cargo aircraft Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN3017

UN proper shipping name Organophosphorus pesticides, liquid, toxic, flammable (Dicrotophos, Isopropanol), MARINE POLLUTANT

Transport hazard class(es)

Class 6.1(PGI, II)

Subsidiary risk 3

Label(s) 6.1, 3

Packing group II

Environmental hazards

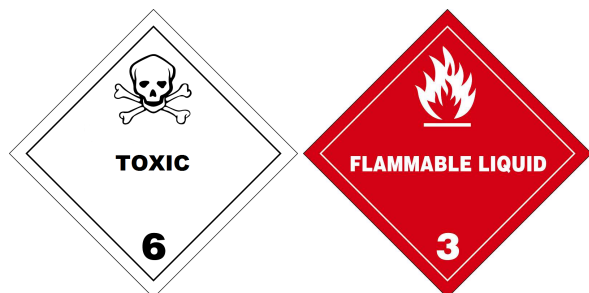
Marine pollutant Yes

EmS Not available.

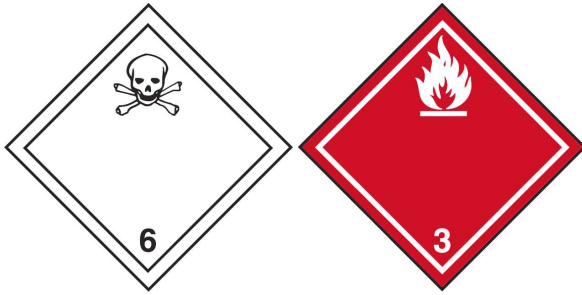
Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

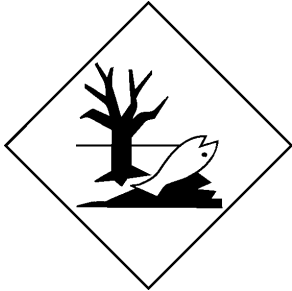
DOT



IATA; IMDG



Marine pollutant



General information

DOT Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

United States Environmental Protection Agency (EPA) Labeling Requirements: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

HAZARD TO HUMANS AND DOMESTIC ANIMALS.

DANGER: Fatal if swallowed, inhaled or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Do not breathe spray mist. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to birds and mammals. Runoff may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Keep out of lakes, ponds, and streams. Do not contaminate water when disposing of equipment washwater or rinsate. This product is toxic to bees exposed to direct treatment on blooming crops or weeds. See the label for more complete information. Do not apply if bees are visiting the treatment area. Do not spray border areas. Keep border areas within 25 feet of field free of bird feed and shelter. Birds feeding in treated areas may be killed. Do not use whenever large flocks of birds are in the vicinity or when they are noted feeding in or around fields.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Isopropanol (CAS 67-63-0) Listed.

SARA 304 Emergency release notification

DICROTOPHOS (CAS 141-66-2) 100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Dicrotophos	141-66-2	100	100		

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Flammable (gases, aerosols, liquids, or solids)
 Acute toxicity (any route of exposure)
 Serious eye damage or eye irritation
 Respiratory or skin sensitization
 Hazard not otherwise classified (HNOC)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Isopropanol	67-63-0	<15.0

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Contains component(s) regulated under the Safe Drinking Water Act.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Isopropanol (CAS 67-63-0)

Low priority

US state regulations**California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Isopropanol (CAS 67-63-0)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	May-08-2015
Revision date	Feb-12-2019
Version #	3.1
HMIS® ratings	Health: 3 Flammability: 3 Physical hazard: 0
NFPA ratings	Health: 4 Flammability: 3 Instability: 0

Disclaimer

This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

AMVAC Chemical Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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CHEMTREC is a trademark of the American Chemistry Council, Inc.

HMIS is a trademark of the American Coatings Association.

NFPA is a trademark of the National Fire Protection Association, Inc.

Revision information

Product and Company Identification: Product and Company Identification

Hazard(s) identification: GHS Signal Words

Ecological information: Ecotoxicity

Other information, including date of preparation or last revision: Disclaimer